

appended to the statement required under paragraph (c)(7) of this section:

(i) "EMISSIONS COMPLIANCE PERIOD: [useful life] HOURS"; or

(ii) "EMISSIONS COMPLIANCE PERIOD: CATEGORY [fill in C, B or A as indicated and appropriate from the tables in § 90.105], REFER TO OWNER'S MANUAL FOR FURTHER INFORMATION";

(d) If there is insufficient space on the engine (or on the vehicle where a supplemental label is required under paragraph (b) of this section) to accommodate a label including all the information required in paragraph (c) of this section, the manufacturer may delete or alter the label as indicated in this paragraph. The information deleted from the label must appear in the owner's manual.

(1) Exclude the information required in paragraphs (c)(3), (4), and (5) of this section. The fuel or lubricant may be specified elsewhere on the engine.

(2) Exclude the information required by paragraph (c)(6) of this section, if the date the engine was manufactured is stamped on the engine.

(e) The Administrator may, upon request, waive or modify the label content requirements of paragraphs (c) and (d) of this section, provided that the intent of such requirements is met.

(f) Manufacturers electing to use the labeling language of paragraph (c)(11)(ii) of this section must provide in the documents intended to be conveyed to the ultimate purchaser, the statement:

(1) For nonhandheld engines: The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emission requirements. For engines less than 66 cc, Category C=50 hours, B=125 hours, and A=300 hours. For engines equal to or greater than 66 cc but less than 225 cc displacement, Category C=125 hours, B=250 hours, and A=500 hours. For engines of 225 cc or more, Category C=250 hours, B=500 hours, and A=1000 hours.

(2) For handheld engines: The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to

meet Federal emission requirements. Category C=50 hours, B=125 hours, and A=300 hours.

(3) The manufacturer must provide, in the same document as the statement in paragraph (f)(1) or (f)(2) of this section, a statement of the engine's displacement or an explanation of how to readily determine the engine's displacement. The Administrator may approve alternate language to the statement in paragraph (f)(1) or (f)(2) of this section, provided that the alternate language provides the ultimate purchaser with a clear description of the number of hours represented by each of the three letter categories for the subject engine's displacement.

[60 FR 34598, July 3, 1995, as amended at 64 FR 15239, Mar. 30, 1999; 65 FR 24307, Apr. 25, 2000]

§ 90.115 Requirement of certification—supplying production engines upon request.

Upon the Administrator's request, the manufacturer must supply a reasonable number of production engines for testing and evaluation. These engines must be representative of typical production and supplied for testing at such time and place and for such reasonable periods as the Administrator may require.

§ 90.116 Certification procedure—determining engine displacement, engine class, and engine families.

(a) Engine displacement must be calculated using nominal engine values and rounded to the nearest whole cubic centimeter in accordance with ASTM E29-93a. This procedure has been incorporated by reference. See § 90.7.

(1) Class I-A—nonhandheld equipment engines less than 66 cc in displacement;

(2) Class I-B—nonhandheld equipment engines greater than or equal to 66 cc but less than 100 cc in displacement;

(3) Class I—nonhandheld equipment engines greater than or equal to 100 cc but less than 225 cc in displacement;

(4) Class II—nonhandheld equipment engines greater than or equal to 225 cc in displacement;

(5) Class III—handheld equipment engines less than 20 cc in displacement,

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(6) Class IV—handheld equipment engines equal or greater than 20 cc but less than 50 cc in displacement, and

(7) Class V—handheld equipment engines equal to or greater than 50 cc in displacement.

(c) The manufacturer's product line will be divided into groupings of engine families as specified by paragraph (d) of this section.

(d) To be classed in the same engine family, engines must be identical in all of the following applicable respects:

- (1) The combustion cycle;
- (2) The cooling mechanism;
- (3) The cylinder configuration (inline, vee, opposed, bore spacings, and so forth);
- (4) The number of cylinders;
- (5) The engine class;
- (6) The location of valves, where applicable, with respect to the cylinder (e.g. side valves or overhead valves);
- (7) The number of catalytic converters, location, volume and composition;
- (8) The thermal reactor characteristics;
- (9) The fuel required (e.g. gasoline, natural gas, LPG); and
- (10) The useful life category.

(e) At the manufacturer's option, engines identical in all the respects listed in paragraph (d) of this section may be further divided into different engine families if the Administrator determines that they may be expected to have different emission characteristics. This determination is based upon the consideration of features such as:

- (1) The bore and stroke;
- (2) The combustion chamber configuration;
- (3) The intake and exhaust timing method of actuation (poppet valve, reed valve, rotary valve, and so forth);
- (4) The intake and exhaust valve or port sizes, as applicable;
- (5) The fuel system;
- (6) The exhaust system; and
- (7) The method of air aspiration.

(f) Where engines are of a type which cannot be divided into engine families based upon the criteria listed in paragraph (d) of this section, the Administrator will establish families for those engines based upon the features most

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related to their emission characteristics.

[60 FR 34598, July 3, 1995, as amended at 64 FR 15239, Mar. 30, 1999; 65 FR 24308, Apr. 25, 2000]

§ 90.117 Certification procedure—test engine selection.

(a) For Phase 1 engines, the manufacturer must select, from each engine family, a test engine that the manufacturer determines to be most likely to exceed the emission standard. For Phase 2 engines, the manufacturer must select, from each engine family, a test engine of a configuration that the manufacturer determines to be most likely to exceed the HC+NO_x (NMHC+NO_x) Family Emission Limit (FEL), or HC+NO_x (NMHC+NO_x) standard if no FEL is applicable.

(b) The test engine must be constructed to be representative of production engines.

[60 FR 34598, July 3, 1995, as amended at 64 FR 15239, Mar. 30, 1999]

§ 90.118 Certification procedure—service accumulation and usage of deterioration factors.

(a)(1) The test engine must be operated with all emission control systems operating properly for a period sufficient to stabilize emissions.

(2) The period sufficient to stabilize emissions may not exceed 12 hours.

(b) No maintenance, other than recommended lubrication and filter changes, may be performed during service accumulation without the Administrator's approval.

(c) Service accumulation is to be performed in a manner using good engineering judgment to ensure that emissions are representative of production engines.

(d) The manufacturer must maintain, and provide to the Administrator if requested, records stating the rationale for selecting a service accumulation period less than 12 hours and records describing the method used to accumulate hours on the test engine(s).

(e) For purposes of establishing whether Phase 2 engines comply with applicable exhaust emission standards or FELs, the test results for each regulated pollutant as measured pursuant